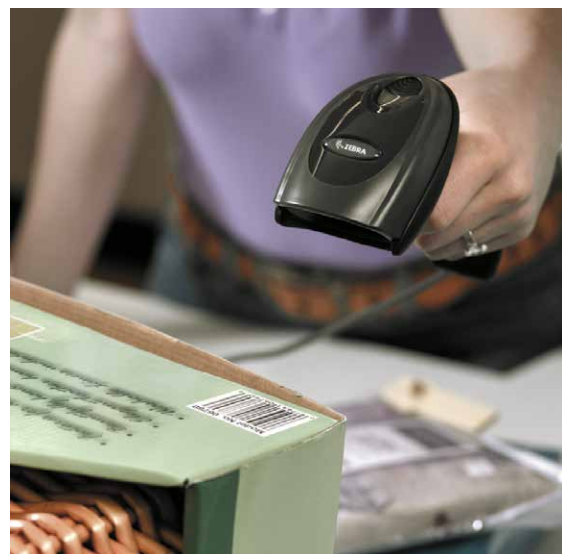


# ScanOnline



## How to Choose the Right Barcode Label



 **ZEBRA**



There are thousands of barcode label options available, each with different materials and adhesives designed for specific labeling and scanning applications.

To help you choose the right labels, we've partnered with Zebra Technologies to explain some key considerations you should keep in mind.

# 1

## Determine the Right Thermal Printing Method

### **DIRECT THERMAL PRINTING**

Direct thermal printing doesn't use ink, toner or ribbon. It creates an image directly on printed material.

Direct thermal materials have a shorter lifespan than thermal transfer and offer minimal resistance to heat, light, abrasion and chemicals.

They're best for shorter-term labeling and scanning applications, but they offer minimal resistance to heat, light, abrasion, and chemicals.

### **THERMAL TRANSFER PRINTING**

Thermal transfer printing uses a ribbon to produce durable, long-lasting images. A thermal printhead applies heat to the ribbon, which melts ink onto the material to form an image.

This technique provides unmatched image quality and durability compared to other printing technologies.

Thermal transfer labels are resistant to a wider variety of temperatures and chemicals as well as abrasion, so they're often a good fit for applications involving exposure to these elements.

To ensure the right resistance, the label material and ribbon must be carefully matched.



## 2

## Choose the Proper Ribbon

### THERMAL TRANSFER RIBBONS

Thermal transfer ribbons are available in formulations for a wide range of durability requirements and labeling applications:

- **Wax Ribbons** are used when there is little to no exposure to weak chemicals and/or moderate abrasion.
- **Wax/Resin Ribbons** are for extreme chemical exposure and/or exposure to moderate abrasion, or where UL/cUL approval is required.
- **Resin Ribbons** are used for harsh to extreme chemical exposure and/or exposure to excessive abrasion, and where UL/cUL approval is required.

# 3

## Select the Right Label Materials

### **Surface**

Different materials and adhesives may be required to help your label adhere to certain surface types or shapes. Curved surfaces are one of the biggest challenges.

### **Extreme Temperatures**

Application temperature is the temperature at which a label is applied, while service temperature is the range at which the label will be used.

Standard materials generally perform well at a minimum application temperature of 25°F, with service temperatures of -65°F to 200°F.

Labeling outside this range requires thermal transfer and normally requires a specialty adhesive to ensure the label remains secured.

### **Abrasion Resistance**

A ribbon with higher resin content will provide improved resistance to label rubbing and scratching.

### **Applicator Use**

If you'll be using an applicator, the label must be cut differently so it peels off properly from the liner. Perforations aren't recommended because they change label stiffness and make it difficult to release from the liner.

### **Chemical Resistance**

A thermal transfer label is required if your label will be exposed to moderate to extreme chemicals. A high-durability resin ribbon is recommended for harsh and extreme chemicals.

### **Indoor/Outdoor Use**

A thermal transfer synthetic material is optimal for outdoor use in sun, rain and snow.

### **Label Lifespan**

If your label only requires short-term readability and doesn't need resistance to chemicals, moisture, and abrasion, a direct thermal paper label will meet your needs. Otherwise, a specialty thermal transfer synthetic label is required.

### **Print Speed, Darkness & Dots Per Inch (DPI)**

Material and ribbon selection influence maximum print speed. Certain print speeds, printing requirements and ribbons require higher print darkness and/or a higher DPI. Special materials, such as synthetics, may also be required to ensure proper printing.



## 4

### Get a Professional Recommendation

To help you choose the right label, ribbon and materials, it's also helpful to consult with a barcode printing and labeling expert.

At ScanOnline, we specialize in barcoding solutions and supplies and would be happy to lend our professional expertise.

As a leading supplier of Zebra printers and labels, we have hundreds of stock and customizable options for any application.

Contact ScanOnline now for free samples and expert help.

Call (704) 983-1495 or [email](#) us now.

The logo for ScanOnline features the word "ScanOnline" in a bold, blue, sans-serif font. Above the letter "n" in "Online", there are three curved lines of increasing size, resembling a signal or Wi-Fi icon.

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